Dr. Sultan Mahmood, *Post-Doc, PhD, MSc, DPH*
on behalf of Faiz Foundation,
Model Town, Lahore on 21 November 2011

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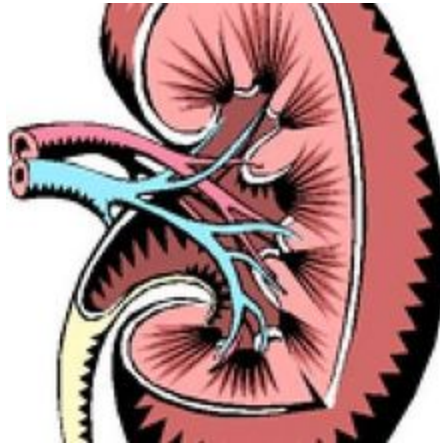
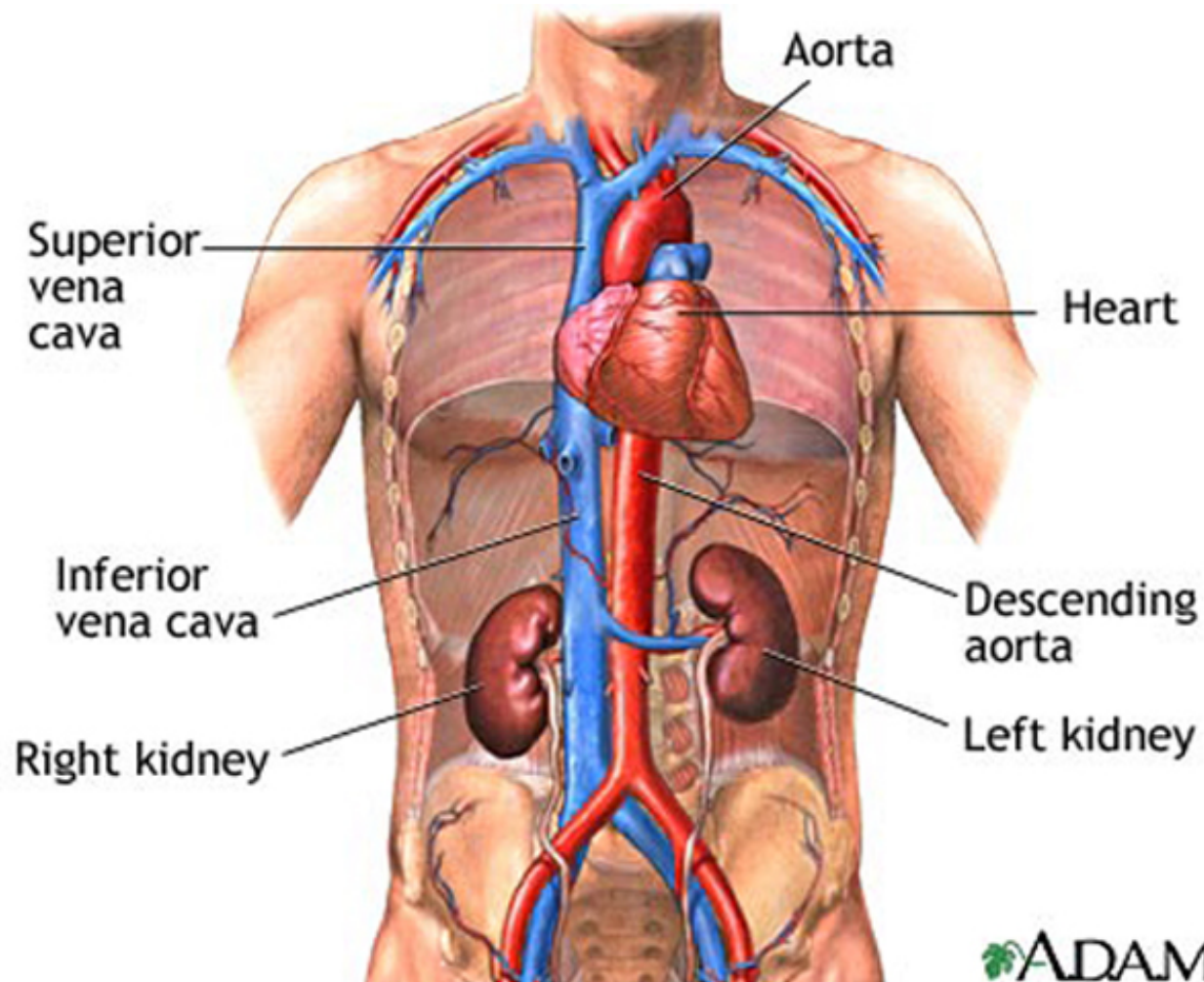
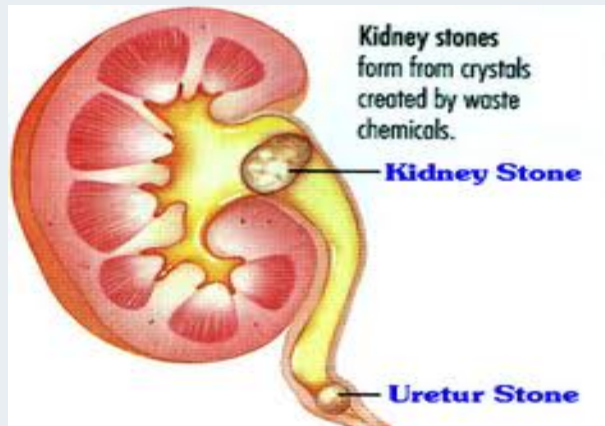
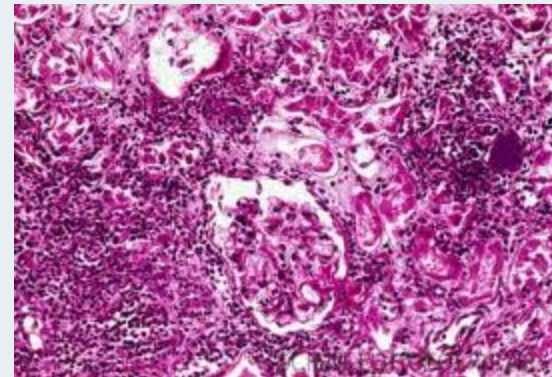
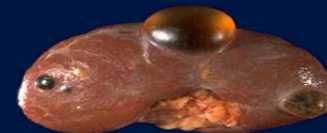
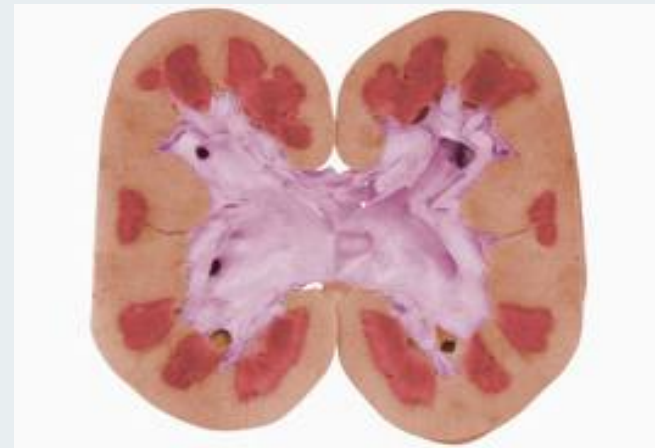
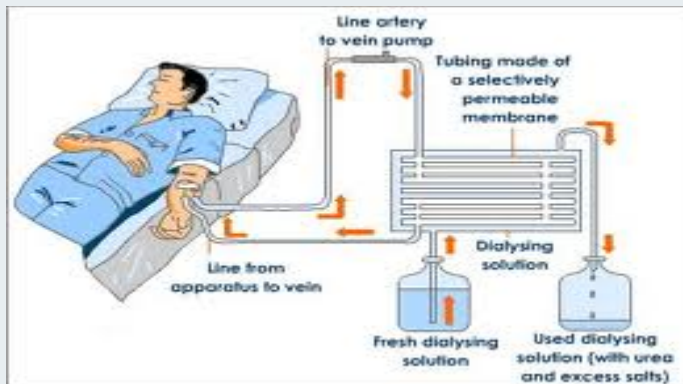
Cell: 0321.430.2528

Dietary Approach to Healthy Renal Function

Standard Renal Function

Types of Kidney Diseases

Various Renal Diseases and Disorders

Kidney Stone

Kidney Infection

Kidney Tumor

Polycystic Kidney

Types of Kidney Diseases

Various Renal Diseases and Disorders	
Kidney Cancer	Kidney Failure
Kidney Dialysis	Kidney Operation

High Uric Acid Level:
What does it mean?

- Uric acid is a waste product formed from the breakdown (metabolism) of substances in food called purines.
- Most of the uric acid made by body dissolves in blood and passes through kidneys into urine.
- However, sometimes body either produces too much or excretes too little uric acid, thus retains high levels in blood.

Causes of high uric acid levels

- Obesity
- Diets high in purines
- Certain medications, including low-dose aspirin, diuretics and some high blood pressure drugs
- Certain diseases that have a high cell turnover rate, such as leukemia, lymphoma or psoriasis

If untreated, it can lead to:

- Gout and Arthritis
- Uric acid stones in the urinary tract
- Deposits of uric acid in the kidneys (uric acid nephropathy)
- Deposits of uric acid in the soft tissue (tophi)
- It is important to note that high uric acid levels are also associated with an increased risk of heart disease.

Impact of Diabetes

- Lowering blood glucose reduces the risk of Chronic Kidney Disease (CKD), for instance:
  - Eye disease by 76%
  - Kidney disease by 50%
  - Nerve disease by 60%

Reference: *DCCT Group. New England Journal of Medicine, 329(14), September 30, 1993.*

- Patients who saw a kidney doctor less than 4 months before needing dialysis had a 60% higher risk of death than those who seen at least a year earlier

- Those with diabetes or hypertension were 2 times as likely to die

Kinchen, K. S. et. al. Ann Intern Med 2002;137:479-486

A Study

- Study participants who consumed the highest amount of meat were 40 percent more likely to have gout than those who ate the least amount of meat.
- Study participants who ate the most seafood were 50 percent more likely to have gout.

Foods Higher In Purines

High

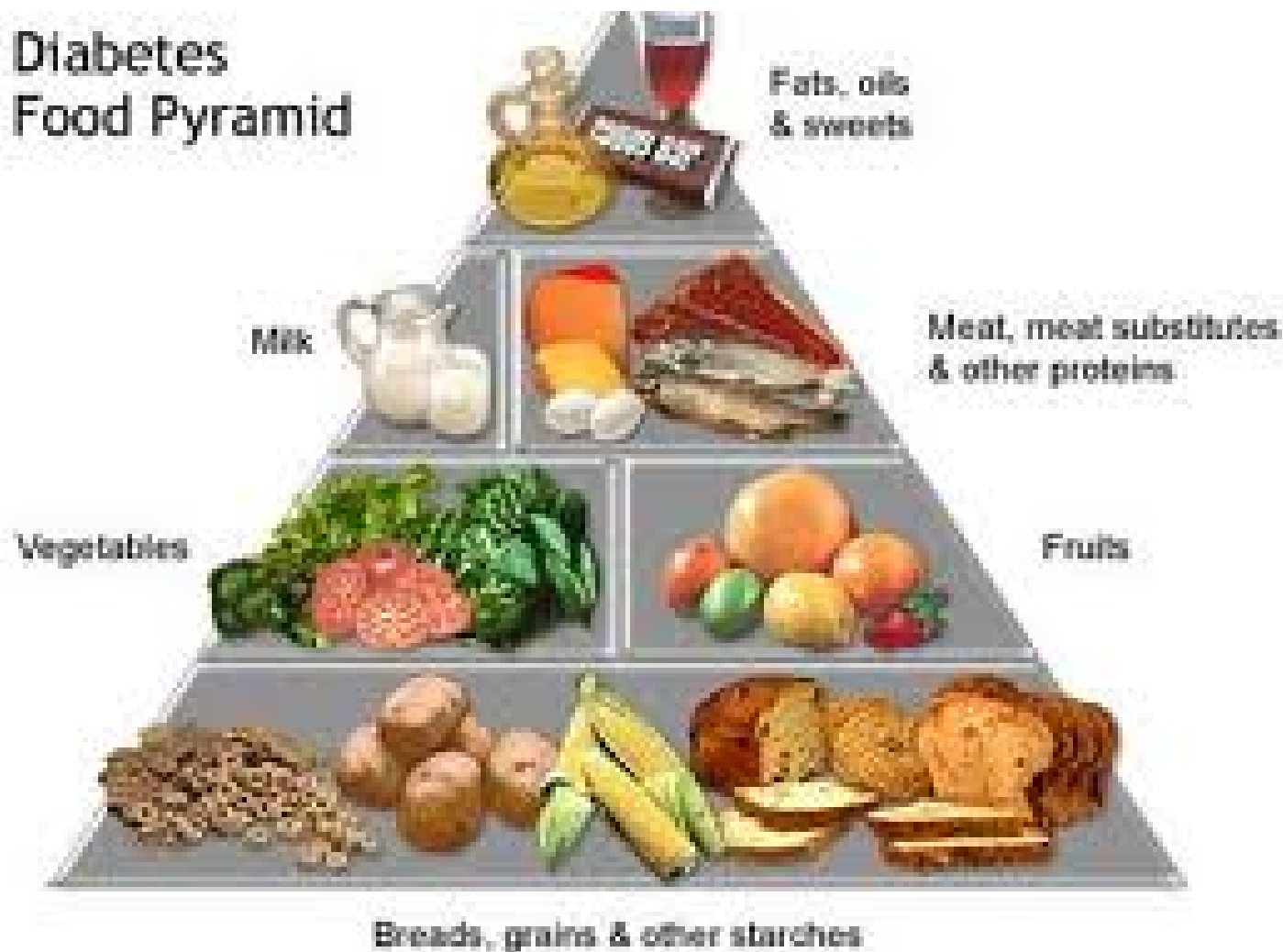
- hearts
- sea fish
- mussels
- yeast
- sweetbreads

Moderate

- mutton
- veal
- liver
- fresh water fish
- kidneys
- partridge
- trout
- pheasant

No increased risk associated with:

- peas
- beans
- mushrooms
- cauliflower
- spinach
- low-fat dairy products (it decreases the risk)

Healthy Renal Diet Plan

Renal Friendly Super Foods

Eat Plenty

Renal Friendly Foods

Food	Benefit
Red bell pepper	Low in K; has lycopene
Cabbage	Low in K; has phyto-chemicals
Cauliflower	Good Vitamin C
Garlic	Anti-clotting; Anti-inflammatory
Onion	Quercetin – a powerful antioxidant
Apple	Anti-inflammatory; Anti-cholesterol
Cranberry	Acidic, so anti-bacterial
Blueberry	Anti-oxidant anthocyanidins; Vit C
Raspberry	Ellagic acid, neutralize free radicals
Strawberry	Two anti-oxidants; Vitamin C
Cherry	Reduce inflammation
Red grapes	Resveratrol, boost nitric oxide
Egg white	All essential amino acids
Fish	Anti-inflammatory fats omega-3s
Olive oil	Polyphenols and antioxidant

Recommendations

- Diet, quitting smoking, and exercise
- Eat a well-balanced meal plan
- Increase water intake but reduce Protein, Sodium, Cholesterol and Glucose but Quit Smoking.
- Cut back on salt and high sodium foods
- Limit your protein if your doctor tells
- Limit potassium and phosphorus
- Limit supplements and drugs that are hard on kidneys
- Watch out for injected dyes used in X-rays

Manage it like Diabetes

Lifestyle intervention

- Healthy low-calorie, low-fat diet
- 30 minutes of physical activity, 5 days a week
- 5% to 7% weight reduction

Metformin (Glucophage)

- Oral diabetes drug

Reference: *DPP Research Group. N Engl J Med 2002, Vol.346, No. 6*.

Some Good Veggies

Peppers (yellow Shimla Mirch) and Pumpkins are the vegetables with the highest levels of Beta-cryptoxanthin per serving

About Green Tea

- **Green Tea and Arthritis: Study Conclusion**

  Examination of joint tissue microscopically revealed marginal infiltration of joint cells in mice receiving the green tea in contrast with massive infiltration in the mice not fed green tea. The effect of the green tea appeared dramatic.

- **Point of Interest**

  In many countries such as India, China, and Japan, green tea is regarded as healthful with the potential to prevent certain illnesses. Seemingly, rheumatoid arthritis in these countries exists at a much lower rate than elsewhere around the world and some people believe strongly in the effect of green tea.

About Coffee

A new large-scale study published in the June 2007 issue of *Arthritis Care & Research* examined the relationship between coffee, tea, caffeine intake, and uric acid levels and found that coffee consumption is associated with lower uric acid levels but this appears to be due to components other than caffeine.

About Smoking

Smoking Doubles the Risk of Severe Arthritis

About Water

To increase excretion of salts, dilute urine by increasing fluid volume to at least 2 lit per 24 hours in Summers and 1 lit in Winters

World
Kidney
Day™
11 March 2010

Thanks!
Any Question?